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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,766

08/08/2006

Harald Kraus

4303-1009

2464

466 7590 05/17/2010

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EXAMINER

CULBERT, ROBERTS P

ART UNIT

PAPER NUMBER

1716

NOTIFICATION DATE

DELIVERY MODE

05/17/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10/588,766	8/8/06	KRAUS ET AL.	4303-1009

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EXAMINER

Roberts Culbert

ART UNIT	PAPER
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1716	0510
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Commissioner for Patents

The reply brief filed 5/10/10 has been entered and considered.

Applicant has argued that the Examiner has not explained how the velocity (in meters per second) was determined based on the volumetric flow rate (liters per minute) taught by Christenson. However, the Examiner has stated previously (See Non-Final 11/21/08; Final 8/14/09; and Examiners Answer 3/9/10) that Tanaka teaches $d=4\text{mm}$ (d = nozzle diameter) which provides the claimed velocity using a volume flow of minimum 0.1 lpm (liters per minute). For a volume flow of 0.1 lpm the velocity through a 4 mm nozzle would be a velocity of 0.13 m/s which reads on a flow of minimum 0.1 m/s. For a volume flow of 0.5 lpm the velocity would be 0.66 m/s which reads on a flow of minimum 0.1 m/s. In general, the flow rate of a fluid is related to velocity for a given diameter by: $\text{flow rate} = \frac{1}{4} * (\pi) * (\text{diameter})^2 * (\text{velocity})$.

Applicant has maintained the argument that Christenson teaches away from the claimed HfO₂ materials since it is stated that they are highly resistant to dilute etchants. However, the argument has been fully addressed in the Examiners Answer 3/9/10.

/Gregory L Mills/
Supervisory Patent Examiner, Art Unit 1700
Designee for supplemental answers

/Roberts Culbert/
Primary Examiner, Art Unit 1716